

AMENDMENTS TO THE CLAIMS

1. (Canceled)
2. (Canceled)
3. (Canceled)
4. (Previously Presented) A cellular phone providing wireless communication, comprising: a main body having a key pad and a hinge thereof along a folding and unfolding axis; a folder having a display displaying data received from the main body; a driving source disposed on a lower portion of the folder along the folding and unfolding axis to generate a driving force; a power transmission unit having one end coupled to the driving source and the other end coupled to the folder to transmit the driving force to folder to rotate with respect to the main body when the folder is in an open state; and a rotation controller coupled to the power transmission unit, disposed in a housing installed at the hinge of the main body in a rotating axis perpendicular to the folding and unfolding axis to automatically and/or manually rotate the folder with respect to the main body;
wherein the power transmission unit comprises: a pair of bevel gears having a driving gear coupled to the driving source and a driven gear coupled to the driving gear and having a shaft fixedly coupled to the folder,
wherein the power transmission unit further comprises: a fixed member disposed on outside surface of the shaft provided on the driven gear to couple the shaft to the folder,
wherein the fixed member comprises: a washer having

a ring shape; and a snap ring disposed on the washer to elastically press the washer.

5. (Previously Presented) The cellular phone of claim 4, wherein the shaft of the driven gear comprises: a bearing disposed on the outside surface of the shaft of the driven gear contacting the folder to increase ~~an~~ a rotation efficiency of the folder.
6. (Previously Presented) The cellular phone of claim 4, wherein the rotation controller comprises: a male cam having one end coupled to the power transmission unit and the other end formed with a projection with tapers on both sides thereof; a female cam having a groove corresponding to the projection to selectively receive the projection of the male cam to control the male cam; and an elastic member disposed below the female cam opposite to the groove to elastically support the female cam to limit a movement of the female cam, and being compressed when the male cam rotates, to release the male cam from the female cam.
7. (Original) The cellular phone of claim 6, wherein the projection of the male cam comprises: a center shaft extended from the male cam in a direction to the female cam to penetrate the female cam, the housing, and the hinge of the main body to be rotatably fixed on an external side of the hinge.
8. (Original) The cellular phone of claim 6, wherein the female cam comprises: at least one rotation preventing member formed on an outer surface of the female cam; and a coupling groove formed on an inside surface of the housing to correspond to the rotation preventing to prevent the female cam from being rotated when the rotation preventing member is caught the coupling groove.

9. (Canceled)
10. (Canceled)
11. (Canceled)
12. (Canceled)
13. (Canceled)
14. (Canceled)
15. (Previously Presented) A cellular phone providing wireless communication, comprising: a main body having a key pad and a hinge thereof along a folding and unfolding axis; a folder having a display displaying data received from the main body; a driving source disposed on a lower portion of the folder along the folding and unfolding axis to generate a driving force; a power transmission unit having one end coupled to the driving source and the other end coupled to the folder to transmit the driving force to folder to rotate with respect to the main body when the folder is in an open state; and a rotation controller coupled to the power transmission unit, disposed in a housing installed at the hinge of the main body in a rotating axis perpendicular to the folding and unfolding axis to automatically and/or manually rotate the folder with respect to the main body,
wherein the folder and/or the power transmission unit comprises: a rotation termination detecting unit detecting completion of the rotation of the folder to terminate the rotation of the driving source,
wherein the rotation termination detecting unit comprises: at least one fixed terminal disposed on the power

transmission unit; and a rotation terminal disposed on the folder to correspond to the fixed terminal, and rotating together with the folder, and detecting the termination of the rotation of the folder when the rotation terminal correspond to the fixed terminal.

16. (Previously Presented) The cellular phone of claim 15, wherein the fixed terminal comprises: first and second sub-fixed terminals disposed around the power transmission unit to be spaced-apart at an interval of 180°.
17. (Original) The cellular phone of claim 15, wherein the fixed terminal comprises a magnet, and the rotation terminal comprises a hall element to detect a magnetic field generating from the magnet to detect the completion of the rotation of the folder.
18. (Canceled)
19. (Canceled)
20. (Canceled)
21. (Canceled)
22. (Canceled)
23. (Canceled)
24. (Canceled)
25. (Canceled)
26. (Currently Amended) A cellular phone providing wireless communication, comprising: a main body having a key pad and a hinge thereof in a folding and unfolding axis; a folder having a

display displaying data received from the main body; a rotation unit having one end coupled to the folder and the other end coupled to an inside of the hinge in a rotation axis perpendicular to the folding and unfolding axis to allow the folder to be folded and unfolded with respect to the main body, and automatically or manually rotating the folder with respect to the main body according to a user selection when the folder is in an open state,
wherein the rotation unit comprises: a motor fixedly coupled to the folder; and a rotation shaft controller disposed in the main body to be coupled to a shaft of the motor to control a rotation of the shaft.

27. (Canceled)
28. (Currently Amended) The cellular phone of claim 26 27, wherein the rotation shaft controller comprises: a male cam having one end coupled to the shaft of the motor and having the other end formed with a projection having tapered surfaces; a female cam having a groove corresponding to the projection of the male cam to limit a movement of the male cam by a coupling state of the groove and the projection; and an elastic member disposed below the female cam, having an elastic force which is greater than a driving force of the motor and less than an external force exerted on the folder to manually rotate the folder to elastically support the female cam with respect to the male cam and to selectively limit the movement of the male and female cams.
29. (Original) A cellular phone providing wireless communication, comprising: a main body having one of a key pad and a display,

and having a hinge thereof along a folding and unfolding axis; a folder having the other one of the key pad and the display, and coupled to the hinge to be folded and unfolded about the folding and unfolding axis with respect to the main body in a folding and unfolding direction perpendicular to the folding and unfolding axis; a rotation unit having a first portion fixedly coupled to the folder along the folding and unfolding axis, a second portion fixedly coupled to the main body along the rotation axis, and a third portion coupled to transmit a driving force between the first portion and the second portion to rotate the folder in first and second directions about a rotation axis perpendicular to the folding and unfolding axis with respect to the main body.

30. (Original) The cellular phone of claim 29, wherein the rotation unit comprises: a driving source disposed in the first portion of the folder, and having a shaft extended along the folding and unfolding axis to generate a driving force; and a power transmission unit disposed in the third portion of the folder, and having one end coupled to the driving source and the other end coupled to the folder to transmit the driving force to folder to rotate with respect to the main body when the folder is in an open state.
31. (Original) The cellular phone of claim 30, wherein the main body comprises a housing disposed in the second portion of the rotation unit, and the rotation unit further comprises: a rotation controller disposed in the housing to be coupled to the power transmission unit and to control the third portion to automatically and/or manually rotate the folder with respect to the main body.